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ABSTRACT

This package consists of a work force development recruitment videotape and companion career development curriculum guidebook that are designed to help practitioners encourage females of all ages to consider training for high-wage computer-based technical jobs. The 15-minute videotape discusses things women want from employment, benefits and requirements of computer-based technical jobs entail, and qualifications employers are seeking in applicants for those jobs. Although it was created to supplement the videotape, the guidebook can also be used as a minicurriculum for facilitators and learners. The following topics are among those discussed in sections 1-7: using the videotape and guidebook; women in the work force; computer jobs on the rise; occupational profiles of computer technician jobs; women and nontraditional work; assessment; and city searches (learning situations where teams of learners use a scavenger hunt format to collect information on particular topics). Sections 8 and 9 contain the following: sources of information on occupational opportunities in New York and elsewhere; addresses of websites devoted to computer-related educational and employment opportunities; New Ventures Program sites; and 21 references. The following are among the materials included: facilitator and client objectives, fact sheets, transparency masters (not in ERIC copy), and personal stories from successful women. (MN)

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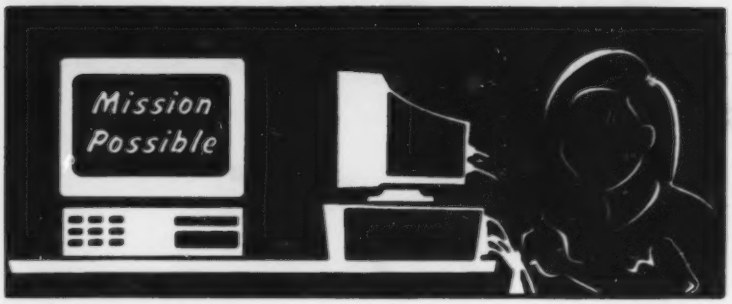
A user's guidebook

for the video

Mission: Possible



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A user's guidebook

for the video

Mission: Possible

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Introduction

The *Mission: Possible* video is designed to be useful as:

- an educational tool, showing what women want from employment and describing computer-based technical jobs.
- a support video for women who are currently employed in nontraditional fields, especially computer-based technical occupations.
- a recruitment video, to challenge and support women upon entering a training program in a nontraditional field, such as computer-based technology. Participation in these training programs allows women to enter the workforce with a challenging and rewarding career in which they will be technically skilled and self-sufficient, with job security and a benefits package.

The guidebook was created to supplement the video, but can also be used solo as a mini- curriculum, with information for both facilitators and participants. The Mission Possible guidebook is arranged in a user-friendly format outlined in the Table of Contents.

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Section I. Using the Mission Possible Video and Guidebook:

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- Guidelines for Conducting A Search in Your Area

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- Numbers
- Websites

Section 9. Resources Consulted:

- Bibliography
- Books
- Journals
- Magazines

SUGGESTED USES FOR VIDEO AND GUIDEBOOK: Read This First!

There are a variety of ways to use the **Mission: Possible** video and/or guidebook, either as a recruitment tool or as an activity with students/participants. First, consider is how much time you have: Are you trying to reach potential participants by hosting a one-session recruitment night? Or will your audience be alredy enrolled in a nontraditional training program for an extended period of time?

If you are recruiting, bring at least the Assessment section of the guidebook along with you. It will help your audience determine whether or not nontraditional employment is appropriate for them. You may also want to consider incorporating some of the "Questions to Expect" on page 1-5 and/or the activities on pages 1-7 through 1-9. If time permits, you could distribute the Occupational Profiles from Section 4, and the Personal Success Stories from Section 5.

If your participants are already participating in a nontraditional employment training program, let the age, maturity level, and neediness of your group determine how you go about using the rest of the guidebook. Early in your program you could show and discuss the video, and then conduct the experiential learning activity "City Search." This would provide your participants with a base to grow from. Each of these activities could be accomplished in a single day, or in two days for maximum discussion and debriefing.

Next you might spend some time with the Background History section, which deserves close attention. It can give our participants a firm understanding of where women's employment opportunities have been--or where they have not--before we ask them to choose their future. What may be of specific interest is the area on women in technology, past and present. We've come a long way. Use the activities provided, or incorporate your own.

The rest of the sections require less time to accomplish their objectives:

- Computer Jobs on the Rise
- Occupational Profiles of Computer-Tech Jobs
- Women and Nontraditional Work
- Assessment

They are self-contained and can be integrated throughout your training program. They all support women entering nontraditional fields, especially computer-based tech jobs.

Lastly, it is recommended that you watch the video and read through the whole manual before using either. You will want to review the goals and objectives, see what materials are needed for the activities, and decide what you might need to modify for your group. You can become familiar with the "Questions to Expect" on page 1-5 to make sure that you are ready to introduce your students/participants to Mission: Possible. As we tell our students, "It is better to be over prepared than underprepared."

➢ Goals for the facilitator

The facilitator will be able to use the video and guidebook as:

- a recruitment video for women entering or planning to enter a computer-based technical training program, or other nontraditional employment training program
- part of a support system for women currently in a computer-based technical training program
- an educational tool for providing information to potential and current participants.

➢ Goals for the participants

The participant will be able to:

- recognize what a computer-based technical job is
- understand different opportunities open to them
- list advantages of computer-based technical jobs.

➢ Tasks for the facilitator

The facilitator will:

- become familiar with the video and guidebook
- determine the most effective way to use them with different target audiences
- research other information that may be pertinent to discussions and activities.

SECTION 1

Using the **Mission Possible** Video and Guidebook

Getting Started with
Mission: Possible

One of the best features of this fifteen minute video is that it shows women who have actually participated in nontraditional training programs and are already working in the field.

Before showing the video, please be sure to preview it and choose the issues and the questions that you want to discuss with your participants. Depending on their age and maturity level, lead either of the suggested activities or one of your own.

The ice breaker activity allows the participant to do some preliminary thinking about their own employment and nontraditional occupations. It also allows them to mingle, and start sharing and connecting with their peers. This is very important--it helps participants to form a support system for each other. The Round-Up activity is more interactive, and is a great one to use with a younger participants, yet accomplishes the same end result.

If you are using this video for a recruitment program, the Assessment section would be an important part of the presentation. You might bring brochures of your program, and other information that would be helpful to recruit participants to participate in your training program. There are numerous possibilities, depending on your situation and goals.

➢ **Goals for the facilitator**

The facilitator will be able to:

- provide participant with a basic understanding of the video
- compose questions to ask participants either before and/or after viewing
- answer questions generated by participant **OR** know where to find answer

➢ **Goals for the participants**

The participant will be able to:

- understand what a nontraditional job is
- respond correctly to why a nontraditional job may improve their employment situation
- name two computer-based technical jobs featured during the video
- list two places where they can go for more information

➢ **Tasks for the facilitator**

The facilitator will:

- lead discussions and pose questions
- gather materials for activities

Summary of the video
MISSION: POSSIBLE

How are you similar to the women on the video? How are you different from the women on the video?

What are some challenges that you might come across while in one of these programs?

Would it be worth it financially to overcome these challenges? Or is easier to give up and stay with a lower paying job?

What are some things that would help you succeed in one of these programs?

In trying to answer the age old question,"What do women want? Mission: Possible focuses on the following information:

➢ **Research shows that women want the following things:**

- work
- to be technically skilled
- to own their own business
- a job where there is some type of security and benefits package

➢ **How can you get a good job with benefits and great pay? With the job of the future. A computer-based technical job.**

➢ **What exactly is a computer-based technical job?**

✦ cable technician	$24,000.
✦ computer aided design	$32,000.
✦ computer repair	$29,000.
✦ computer aided manufacturing	$37,000.

Where can you go to get more information? How do you ask for more information?

What is attitude? How does attitude play a role in any of this?

Determination - What is it? Is it possible to succeed without determination? How did the women in the video show determination?

➢ **Why can't I get a good job like these?**

You may lack training. Get information from the following.

- Your local employment and training office.
- Your local community college.
- BOCES and/or Technical Training School.

➢ **What you need are:**

- Training
- Attitude
- Determination

Questions that may arise from watching *MISSION: POSSIBLE*

➢ **Preparing for a computer-tech job**

- What are computer-tech jobs?
- I'm not good at math--how can I learn to use the computers?
- What are the challenges I might encounter in pursuing an occupation like this?
- Where can I find listings of jobs related to computer technology?
- What other types of jcbs are like these?
- Why are computers so important?
- How long does it take to train for these jobs?

➢ **Working conditions and benefits**

- Do I have to work outside?
- What are the hours?
- Do I get benefits?
- What are the advancement opportunities?

➢ **Other concerns**

- I've never used a computer, how hard is it to learn?
- What do I do with my children while I'm in training?
- What type of adaptive equipment would be necessary for a woman with a disability (i.e. person with physical and/or learning)?
- Will there be child care available?
- How will I get there?
- Do you have to be good at math?
- How do I know if I'd like this kind of work?

ACTIVITIES

(A) ICE BREAKER

Objective: To create a comfortable environment for participants to interact with each other and ask questions.

Materials: 4 x 6 cards, markers, string

1. Before showing video, pass out 4 x 6 card and marker to everyone.
2. Ask women to write the answers to the following questions on their card (see example)

What do you want from a job	Age (optional)
NAME	
Can women do men's jobs?	example of computer-based tech jobs

3. Partner off with someone you don't know and discuss your answers.
4. Reconvene as a large group and discuss your answers.
5. Watch video and further discuss women's cards with video (see questions on side of narrative).
6. Ask again and stress nontraditional employment. "Can women do men's jobs?"
7. Ask the group to explore the area of computer-based tech jobs like they witnessed in the video.

(B) *ROUND-UP*

Ojective: To allow a "younger" group to interact with each other and draw conclusions based on their own experiences and the video.

Materials: flip chart paper, markers, tape

1. Write one of the following questions on an individual sheet of newsprint:
   - What do women want?
   - How can you get a great job with benefits and good pay?
   - What exactly is a computer-based technical job?
   - Where can you go for information?
2. Tape sheets to the wall and ask participants to look for answers in video.
3. Watch video.
4. Ask participants to take marker and write their answer under each heading.
5. Discuss their answers.
6. Further discuss questions on side of narrative.

SECTION 2

Women in the Workforce

Women in the Workforce

I believe and I think that you will agree, before we can expect our participants to decide where they are going, they should have an understanding of where they've been. This section provides you with a background "herstory" of employment opportunities that women have had: *From the Typewriter to the Computer.* There are many ways to use this section, the discussion questions and the activities that correlate with it. Allow sufficient time for your participants to read and thoroughly understand their gender's technology- based employment history.

Choose from the discussion questions provided or make-up your own. Either way, establish a mastery level from your participants. Use the activities to reinforce what they are learning, and to consume other, different information relevant to the subject. However you choose to utilize this section, make it fun and friendly. Learning new information should be exciting to the participants, this will make them hungry for more.

If you are interested in sharing a more in-depth background history perspective with your participants, see *Women Have Always Worked: A History of Gender and Work* located at the end of this section.

➢ Goals for the facilitator

The facilitator will be able to:

- provide participants with an outline of women's roles in the workforce
- give an overview of women and their role in technology
- encourage participants to explore/research more information on topic

➢ Goals for the participant

The participant will be able to:

- discuss women's roles in employment: past, present, future
- list some technical occupations that women have pursued through the years
- write five facts about women workers

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➢ **Tasks for the facilitator**

The facilitator will:

- provide other research on the topic for participants to explore
- discuss questions provided, as well as others, with participants
- show over-head "20 Facts on Women Workers"
- gather materials for activities

"Technology of the early industrial era profoundly affected the utilization of workers' skills and altered gender-based divisions of labor. Mechanization and routinization permitted the breakdown of skilled work into relatively unskilled functions that were minute pieces of the entire production process. In industries that replaced household production formally performed and controlled by women, technological change permitted men's employment in large numbers. Conversely, in industries that had once been the province of skilled white males, technology gave women new opportunities" (Drygulski-Wright, 1987, pg. 35-37).

What two inventions aided in the separation of clerical work from administrative work?

Which occupation was predomnately male, then transformed into a female dominated job?

What has revolutionized office employment?

➢ From the Typewriter to the Computer

More recently women are moving rapidly into those occupational groups in which employment has been expanding because of new technology and organizational changes. Technological change in the workplace brings the promise of more and better job openings for skilled new workers. It also promises opportunities for those already working to raise their skill levels and increase workplace autonomy. Computer-based technologies with post-secondary training, offer skilled positions that are relatively free of gender segregation. Succeeding in a technical skills training program is a giant step up for any woman seeking higher pay, more interesting work, and better job opportunities.

As the demand for paperwork increased due to the growth of urban populations and commerce in the century, routine clerical work (typing, filing, and stenography) was separated from administrative work. This change, facilitated by the widespread introduction of the typewriter and the telephone, transformed office work from a predominately male occupation to a female dominated service industry. This shift took place because the typewriter was a new machine, and therefore gender-neutral.

Soon after the typewriter became commonplace, stenography became popular. Women were encouraged to learn both skills, creating a new job category: the business stenographer. The employment of business stenographers and typists "revolutionized" the office.

"Some commentators have seen the transformation of the work process that microprocessors and computerization in general have introduced to be nothing less than a second industrial revolution" (Drygulski-Wright, 1987, pg. 37).

Who did most of the programming of the first computers? Why?

What background did the first women computer programmers have?

Why did employers begin to hire more men programmers?

Why have some women in the technological fields not reached the same status as men?

➢ Women and Computers

The large numbers of women in the labor force today resulted in part because the "new" technology of the typewriter created particular jobs for which women seemed to be well suited. Once again, technology is dramatically changing the working conditions of women today. Much of the impact of these dramatic changes is being felt in jobs where women workers are already concentrated, particularly in clerical and service occupations which employ half of all women workers.

Women's involvement in computer work began with the very first computer, the ENIAC (Electronic Numerical Integrator and Computer). (In fact, the first programmers were women with a background in science and math.) ENIAC was the first general purpose electronic digital computer to be designed by women, built, and successfully used. Many young women college graduates were involved in various ways with ENIAC from 1942-1955. This period covered ENIAC's pre-development, development, and 10 year period of its operational usage.

Six women computers became the original group of ENIAC programmers: Kathleen McNulty, Frances Bilas, Betty Jean Jennings, Elizabeth Snyder, Ruth Lichterman, and Marlyn Wescoff.

What is a computer?

During WW II, who was considered more capable of doing computer work rapidly and accuractely?

Who was recognized as the first computer programmer? What did she do?

Who was Grace Hopper? What major role did she play with electronic computers?

What is COBOL?

During the years 1942-1955, most of the people employed as computers (people who did computing were called "computers") were women. It was women who had the responsibility of developing the firing and bombing tables needed during World War II. The job of computing was critical to the war effort, and women were considered more capable of doing the work rapidly and accurately than men were. By 1943, and for the balance of WW II, essentially all computers, and their direct supervisors, were women.

Since the introduction of the computer, computer technology has changed dramatically. In the beginning, programming computers was a slow, tedious job. Women were initially hired because it was assumed that programming would be similar to clerical work. Lady Augusta Ada Byron, is recognized as the first computer programmer. She wrote the "code" to run these machines.

When employers realized that programming demanded more complex skills, they began to hire more men--and programming gradually became seen as a "man's job." Although many of the women pioneers remained, few new women were recruited as programmers.

Eventually, there was a change in the division of labor in the computer field as a whole. As the field of programming became subdivided, the duties of programmers and operators became more narrowly defined to comprise a smaller number of tasks. Women began to re-enter computer occupations.

Grace Hopper was the driver for modern U.S. computer technology. She coined the term "computer bug" during her work with the first electronic computers when she found the moth that had shorted out two tubes. She built the first A-O compiler and invented the computer language APT. Ms. Hopper also verified the language COBOL.

True or False? Computer occupations offer skilled women better pay and job opportunities than many other jobs?

Women have begun to move into computer specialities in larger numbers. (Women's opportunities for moving into traditionally male occupations are always greatest in those jobs experiencing rapid growth.) Computer occupations offer skilled women good better pay and job opportunities than many other jobs. Although women in computer occupations earn less than their male co-workers, these occupations offer skilled women better pay and job opportunities than many other jobs.

20 Facts on Women Workers

1. There were 103 million women age 16 and over in the United States in 1995. Of that total, a record 61 million were in the civilian labor force (persons working or looking for work).

2. Women's share of the total labor force continues to rise. Women accounted for 46 percent of total United States labor force participants in 1995 and are projected to comprise 48 percent in the year 2005.

3. Nearly six out of every ten women--58.9 percent--age 16 and over were labor force participants (working or looking for work) in 1995.

4. Women between the ages of 20 and 54 had labor force participation rates of at least 70 percent. Even half the Nation's teenage women ages 16-19 were labor force participants--52 percent.

5. Labor force participation by marital status varies for women. Divorced women have higher participation rates mainly because they are the primary or the only wage earners in their families.

6. Unemployment for all women in 1995 was only 5.6 percent. For white women it was 4.8 percent; 10.2 percent for black women; and 10.0 percent for Hispanic women.

7. Nearly 58 million women were employed in 1995 with the largest proportion still working in technical, sales, and clerical occupations.

8. Women have made substantial progress in obtaining jobs in the managerial and professional specialties. In 1985 they held one-third (35.6 percent) of managerial and executive jobs and nearly half (49.1 percent) of the professional jobs. By 1995 they held 48.0 percent of all managerial/executive positions and over half (52.9 percent) of professional occupations.

9. Women are not only more likely to work outside the home today than in the past, but they also spend more time at work than did women in earlier years. Women have increasingly opted due to economic necessity, but also due to movement into occupations that require full-time, year round work.

10. Of the 57.5 million employed women in the United States in 1995, 42 million worked fulltime (35 hours or more hours per week); 16 million worked part-time (less than 35 hours per week). Two-thirds of all part-time workers were women (68 percent).

11. Many women who work part time are multiple job holders. In 1995, 3.6 million women held more than one job. The highest rates of multiple jobholding was among women 20 to 24 years old and single women--7.3 percent and 7.2 percent, respectively.

12. Of all women who were multiple job holders in 1995, those in the 35 to 44 age group were most likely to hold 3 or more jobs.

13. The ratio of women's 1995 median weekly earnings to men's was 75.5 percent. Even in traditionally female occupations where women out number men, women still earn less than men.

14. With women still concentrated in lower paying occupations and having overall earnings about three-fourths that of men, it is predictable that more adult women than men are below the poverty level.

15. Of the 14 million families maintained by women, 4.2 million were below the poverty level in 1994. This represents 34.6 percent of all families with female householders.

16. Women have, however, made great strides in becoming entrepreneurs. According to the latest Census Bureau data, women owned over 6.4 million of all U.S. businesses in 1992, employing over 13 million persons and generating $1.6 trillion in business revenues.

17. Nearly three-quarters of these women owned firms operated as a service of retail trade in such businesses as apparel and accessory stores; automobile dealerships; gasoline service stations; miscellaneous retain stores; business services; health services; and personal services.

18. In 1995, 3.4 million women were self-employed workers in nonagricultural industries. A large number of these self-employed women worked in the following industries: wholesale and retail trade; professional services; personal services; and social services.

19. Of all labor force participants age 25 years and over in 1995, women were more likely than men to have completed high school. Ninety-one percent of female labor force participants held the minimum of a high school diploma, compared with 88 percent for men. A slightly lower percentage of female labor force participants than men were college graduates--27 percent compared with 29 percent.

20. Employment and earnings rates rise with educational attainment for both females and males, but earnings are lower for females than for males with the same education.

Source: U.S. Department of Labor, Women's Bureau (1996)

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ACTIVITIES

(A) *Women in History Timeline*

Objective: To provide participants with a visual, historical background of women and their employment patterns.

Materials: construction paper, markers, scissors, glue, old magazines, copies of *Women Have Always Worked: A History of Gender and Work*, for everyone.

1. Have participants read the section *Women Have Always Worked: A History of Gender and Work*, or discuss and have understanding of women's roles (past and present).
2. Allow students to explore magazines, looking for women portraying different types of employment.
3. As a group, create an employment timeline for women using dates and pictures. (Include traditional and nontraditional employment.)

(B) *Type Away*

Objective: To use as a cross-discipline activity: typing and understanding.

Materials: copies of *Women Have Always Worked: A History of Gender and Work* for everyone, access to computers

1. Give everyone a copy of section - *Women Have Always Worked: A History of Gender and Work.*
2. Allow them to sit at computer before they have read it and type material.
3. When done, come back as group and discuss.
4. See how much information has been retained by asking questions outlined in section.

(C) ***Men's, Women's or Anyone's Work?***

Objective: To gain a better understanding of nontraditional employment

Materials: markers, newsprint paper, 3 x 5 cards, tape

1. In class, ask students to write down on a separate 3 x 5 card all the jobs they can think of (to refute the idea that some jobs are only for men or only for women).
2. Collect the information and compile two lists on newsprint - jobs of males and jobs of females.
3. Identify the jobs that are nontraditional for women and for men.
4. Discuss the reasons that so few occupations are traditionally held by women.

Questions:
- How have events shaped the types of jobs women historically held?
- How do societal and personal values affect the jobs available for women?
- Do you think there will ever be 50% men and 50% women in all jobs?
- Why or why not?

ACTIVITIES TO CONSIDER

Women Have Always Worked

Objective: For the participants to become familiar with famous women in history and the kind of work they are engaged in.

- Choose a film about women to show.
- Supply a book list for the participants to read about famous women
- Have them write book reports about famous women
- Give oral reports on the accomplishments of famous women.
- Invite women who are active in your community to speak to the class.
- Discuss how events have shaped the kinds of jobs women have historically held.

➢ Women Have Always Worked: A History of Gender and Work

Have women always worked? Were they paid for their labor? If not, was it really work?

Women have always worked--in their homes and the homes of others, in fields, factories, shops, stores, and offices. The kind of work done has varied for women of different classes, races, ethnic groups, and geographical locations. The nature of women's work has also changed over time as cities grew and work became industrialized. But one thing about women's work always remains the same: There is a constant tension between the two areas of women's lives--the home and the workplace.

What actually is the difference between employment and work?

Throughout American history, women have done unpaid domestic work. They have cleaned their homes, cared for children, planted and harvested family gardens, cooked and served meals, and generally attended to the emotional needs of family members. In some cases, they have done this work in addition to their paid work, which has included taking in boarders, doing piecework at home, and working outside the home for wages. Frequently, their unpaid domestic labor has not been considered "work."

Who chooses what women can and cannot do? Are these choices fair?

Until the nineteenth century, most women who needed to earn money went "out to service," doing domestic work in other people's homes. With the development of manufacturing, women began to work in factories, and then, late in the twentieth century, they worked in offices, stores, and hospitals as well. Women, like men, entered the workforce because they needed to earn money to help support themselves and their families. Almost always, they worked separately from men and for much lower wages.

Can women do the same work as men?

Women often worked to solve the problems of our rapidly growing cities, trying to improve conditions in neighborhoods, work places, hospitals, and prisons. They fought against slavery and for world peace. They joined unions, started settlement houses, and entered the helping professions. "The notion that emerged in the late nineteenth century of women as guardians of moral virtue in the home was easily translated, by some, into a social mission to reform the world" (Kessler-Harris, 1981, pg. 112).

What are some of the reasons that may prevent women from working outside the home?

By the 1960's and 1970's, many more women were working outside of the home. Today, approximately half of all women--many of them mothers of small children--work outside of the home. This creates great demand for day care and other services for single parent and two-breadwinner families.

The overwhelming majority of women in the paid labor force still work in "female" jobs, though a significant minority are beginning to enter "male" occupations.

How did the Industrial Revolution effect employment?

When women first moved into industry jobs, were they paid high or low wages? Why?

Where women's wages able to sustain households?

➢ **Women Move Out Into the Workforce**

As production began to move out of the household into factories, offices, and stores in the century, the kinds of work that women did at home changed dramatically. The industrial revolution made a clear distinction between the unpaid jobs necessary to maintain the household and the jobs done for pay. This caused a shift in the tasks assigned to men and women, and a shift in ideas about the whole idea of work.

Women who maintained the home and did not collect wages were no longer considered workers. The essential tasks of the household, such as caring for the children, food preparation, cleaning, and laundering, were no longer recognized as work. It was the women who began to work in the new jobs outside the home who were recognized as "workers."

When women began to move out into the workforce in large numbers, they faced low pay and poor working conditions. Employers justified this by saying that women's wage work was only temporary, preparing them for their real role -- as wives and mothers. Defining women's work in this way upheld many traditional ideas about the roles of men and women: It confirmed women's status as subordinate to men. Since women's wages were insufficient to sustain

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households, women were less likely to seek permanent wage work. This was useful for employers because it ensured a continuing supply of cheap labor at times of labor shortage.

As family needs occurred, did more women drift in or out of the workplace? Why?

Though many women were drawn into the labor force, most of them managed to drift in and out of jobs in response to family needs. Until 1890, fewer than 20 percent of all women over fourteen were in the paid labor force at any one time. The numbers of native-born white women earning wages did not begin to increase dramatically until after World War I. (Black women rarely had the option of working only at home. They worked for pay at about three times the rate of immigrant women.)

Prior to 1890, what percent of all women over age 14 were in the paid labor force at one time?

Even the limited number of jobs open to women were not available to all women. Discrimination played its part in reducing job choices. For black women, domestic service always seemed a "lesser evil" thanfield work, which was frequently their only other option. Until World War I, few other jobs were open to black women, although some employers would hire them for menial tasks. Tobacco processors, for example, employed black women to strip tobacco--a job that white women would accept only as a last resort.

Who engaged in paid labor at three times the rate of immigrant women?

Employers used language and race to build barriers between employees. Some garment industry factories, for example, deliberately hired women who spoke different languages so workers could not communicate with each other.

What happened to Native American born women after World War I?

Why did manufacturers hire women as workers?

How could female factory workers distrup the home? Or so it was thought?

What percent of women worked in the paid labor force in the mid 1840's?

➢ A Clash of Values

The new manufacturers of the century desperately needed workers. Many of the jobs to be done were seen as "women's jobs" in the sense that women had traditionally done this kind of work. Yet many believed that moving women into the factories threatened to disrupt the home. For one thing, household chores required women's attention. Even more important, the nurturing and giving qualities valued in a wife and mother might be weakened by a woman's struggle to earn a living.

This tension emerged as a problem in the early nineteenth century. Before that, when most women had earned their living by going out to service, their jobs simply reinforced the values of home life. As the demand for non-domestic labor increased, there was a conflict between the need for women workers and the need to keep the "home" intact. This conflict of values became a major factor in deciding where and how women should work.

➢ "Women's Work" in the 19th Century

Although only about 10 percent of all women worked in the paid laborforce in the mid-1840's, they made up half of the factory workers. In textiles, shoes, and hats, the number of women workers was even higher. Eighty to ninety percent of the operatives in some New England mills were women.

If the mills had continued to provide the reasonable working environments that their first employees were promised, they would have provided a source of respectable employment for women. This of course did not happen. By the mid-1850's, the only acceptable occupations for "respectable" women were teaching and, if necessary, dressmaking in the privacy of their homes. A talented and lucky few might earn their living at writing.

What specific industries had a high amount of women workers?

What occupations were considered "fit" for a women I the mid 1850's?

Ture or False. In the late 19th century, women received 20 percent of men's wages?

What would be a reason for which employers refused to train women?

The traditional belief that women belonged at home allowed employers to exploit working women. Women workers were treated as though their jobs were temporary and their earnings were merely "extra" money. Employers refused to train women to perform skilled jobs, making their poverty worse and preventing them from moving beyond the limits of an unskilled laborer. Until the end of the nineteenth century, women usually received about one-third to one-half of the average male wage, a sum that was hardly enough for a single women to support herself.

Employers also benefited from competition between men and women, which they fostered by maintaining different wage scales. While men and women normally did not compete for the same jobs, employers sometimes decided to "change the gender" of a job in response to changing technology and labor market conditions.

For example, in the nineteenth century, fewer thanone percent of the women who earned wages worked as clerks, cashiers, typists, or stenographers. (Before the introduction of the typewriter, these were "men's jobs" which required more skill and offered better pay.) By 1900, 10 percent of women workers filled such jobs. Then in World War I, the field expanded so rapidly that by 1920, more than 25 percent of all wage-earning women worked in offices.

Between 1890 and 1920, the creation of giant, impersonal corporations had a number of consequences for the work force. They employed large numbers of female clerical workers. Which relied heavily on increasing sales to sustain corporate growth. Retail stores also began to seek large numbers of women clerks.

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➢ Gender Segregation on the Job Continues

What happened to women's employment and their roles between 1890 and 1920?

By the end of the 1920's, most male and female workers continued to be segregated according to traditional gender roles. To meet the new needs of the labor market for people with different skill levels to take on a variety of business and professional jobs, manufacturers supported the development of vocational schools. Vocational training schools for women almost universally offered training in domestic science and typewriting. Companies supported secretarial schools that taught stenographic skills and office manners. Some schools and professional institutions opened their doors to prepare women to be teachers, social workers, and nurses. A very few women entered graduate school and became doctors and lawyers.

Who supported the development of vocational schools and why?

Because of the tight segregation of the labor forceby gender, men did not take over women's jobs in any large numbers during the depression. A few men became librarians or moved into teaching and social work. But by and large these professions remained female. Men did begin to dominate "gender-free" jobs where the numbers of men and women workers had been roughly equal. Women lost some ground, but also moved into a few "men's jobs" --particularly where the job structure had changed as a result of new machinery or streamlining of operations.

What was a major reason that male and female workers were segregated from each other?

These rigid lines of gender segregation came under attack in W.W. II when the enormous need for labor encouraged employers to look to women to fill jobs vacated by the men who went into military service. Although most of these new women workers were forcibly retired when the veterans returned to reclaim their jobs, it was not long before women began to reappear in the workforce.

By the end of the 1920's what were two nontraditional jobs that women began to enter?

But the jobs that women moved into during the late forties and fifties were not the same ones they had held during the war. Women lost out on heavy industry jobs entirely, and with a few exceptions they lost the gains they had made in manufacturing jobs. The proportion of female physicians and lawyers also decreased.

What were some female gender-defined professions?

What was the major reason for women to gain ground of men's jobs during the mid-twentieth century?

After World War II, what employment opportunities were available for women?

In 1975, what was the single, largest category of wage earners for women? What occupations followed?

In the expanding service sectors, women found work in ever increasing numbers. The proportion of women who were teachers, librarians, and social workers remained at its highest level. Opportunities in office work and in the health and social service fields increased rapidly.

In the 1970's, women fitted perfectly into the growing offices that needed more and more clerks and secretaries of all descriptions. A society increasingly dependent on professional services encouragedwomen to go into teaching, nursing, and social work by appealing to their traditional orientation toward serving others. In 1975, clerical workers constituted the single largest category of women wage earners, followed closely by food service workers, teachers, salesclerks, and then other office personnel like typists and bookkeepers. Hairdressers, domestic servants, nurses, dietitians, and therapists were among the top ten categories of women workers.

These jobs had all the familiar characteristics of women's work:
They were defined as women's work, and therefore gender-segregated. They were low paying, with full time women workers earning only about 60 percent of men's wages. They offered limited benefits and opportunities for advancement.

Were office jobs segregated or not?

Presently, what percent of women make up the labor force? What percent is estimated by the year 2005?

What current employment opportunities for women pay lower than average wages?

➢ **Today Most Women Work Outside the Home.**

In 1940 nearly three in ten working age women were in the labor force, either holding jobs or looking for employment. After W.W. II and through the 1980's, labor force participation by women increased and then remained stable. Today women account for 46 percent of the total labor force, up from 24 percent in 1940. Women are expected to make up 48 percent of the labor force by year 2005.

Currently, women are employed in every industry and hold nearly every kind of job. Women have made substantial gains in some occupations traditionally dominated by men, particularly managerial and professional fields, such as law. However, women still remain concentrated in service, sales, and clerical jobs. These jobs, which often pay lower-than-average wages,employed nearly six in ten working women in 1994.

The kinds of employment opportunities available to women, reflect a combination of many factors, including:

- gender roles socialization, which influences both the kind of work that men and women choose and how family;
- the amount and type of education completed by workers;
- the types of jobs that have expanded or declined; and
- in some cases, discrimination.

The occupational group in which women and men were most equally represented in 1994 was managers and professionals. Gender differences were more dramatic among workers in other major occupational groups. (The odds that a working women has the same type of job her father had, holds true only if he was a professional or other white-collar worker.)

Education is an equalizer in many cases. Most jobs that require specific amounts of post-secondary education offer more opportunities to women. Women have made virtually no headway in the skilled construction trades and other

traditionally male blue-collar occupations. Men are much more likely than women to work in precision production, craft, and repair jobs--such as construction trades--or as operators, laborers, or farmers. Four out of every ten men held these jobs in 1994, compared with only one in ten women.

Women have moved most rapidly into those occupational groups in which employment has been expanding because of new technology and organizational changes. Technological change in the workplace brings the promise of more and better jobs openings for skilled new workers. It also promises opportunities for those already working to raise their skill levels and increase workplace autonomy. Succeeding in a technical skills training program is a giant step up for any woman seeking higher pay, more interesting work, and better job opportunities.

SECTION 3

Computer Jobs on the Rise

Computer Jobs on the Rise

This section briefly outlines the increase of computer usage in employment. The *NYS Projected Fastest Growth Occupations* chart is included to alert your participants to specific occupations that are increasing rapidly. Five of the twenty occupations listed are computer-based jobs. These are rapidly becoming the hottest jobs around.

➢ Goals for the facilitator

The facilitator will be able to:

- engage participants in conversations regarding computer and employment
- show how computers benefit everyone

➢ Goals for the client

The client will be able to:

- discuss computer-related job projections
- list the five computer-related, fastest growing occupations for the State of New York 1995-1998
- recognize which computer-based jobs will be sought by all industries
- name two nontraditional computer-related technological jobs for women

➢ Tasks for the facilitator

- show overhead *"Projected Fastest Growth Occupations New York State 1995-1998"*
- scout out other information **in your area** related to computer jobs on the rise

Eight Facts About Computer Jobs on the Rise

Why do you think computer related careers will be common-place?

#1. The U.S. Department of Labor predicts that by 2005:

- More than 2 million people will be employed in occupations directly related to computers.
- Millions of others will have to use computers as a routine part of jobs that do not presently require them.

These projections taken at face value suggest a future in which computers and computer related careers will be commonplace.

#2. Although some traditionally male occupations are opening up to women, most have not changed much. But one set of occupations in which women have made the most modest inroads is computer specialties, a field that has dramatically grown over the past 10 years.

#3. In 1970 women accounted for 13.6 percent of all systems analysts; by 1980 it was up to 22.5. During the same period women increased their representation from 11.1 to 27.7 percent as operations and system researchers, and by 24.2 to 31.2 as computer programmers.

Can you think of reasons why women's employment in computer-related fields has increased?

#4. Computer engineers and scientists and system analysts are among the top five fastest growing professions. (In fact, employment in high technology industries as a whole has increased faster than all wage and salary employment.) The top forty growth jobs of the next decade will include computer engineer, computer systems analyst, computer-operations researcher, and data-processing equipment repairer.

Name some computer-related careers that may be considered nontraditional for women.

#5. Computer firms will offer many more job opportunities as growth in the industry continues. Computer and data processing services will create 795,000 new jobs from 1992-2005 (Stair, 1997, pg. 82).

#6. Software companies, computer-services companies specializing in outsourcing, and information-services companies specializing in databases and networks.

#7. Both individual consumers and companies will buy personal computers in increasing numbers. So specialists in communications, networks, and database technologies will be sought by every industry. Systems analysts and applications programmers with skills in these areas, as well as expert systems, systems integration, and image processing will be very much in demand.

#8. "Industries outside of the computer industry offering the most opportunities include financial services, consumer products, manufacturing, utilities, education, insurance, biotechnology, health care, and pharmaceuticals. Opportunities with the government will be in areas such as managing new storage technologies, databases, and networks" (Stair, 1997, pg 83).

Projected Fastest Growth Occupations
New York State
1995-1998

Rank	OES Code	Occupation	1995 Base Year	1998 Projection	3-YR GROWTH	3-YR %CHANGE
	OOOOO	Total, All Occupations	8555100	8722100	167000	2.0%
1	25199	Computer Scientists, n.e.c.	4800	5800	1000	20.8%
2	68021	Ushers, Lobby Attendants, Ticket Takers	7700	9300	1600	20.8%
3	25102	Systems Analysts	29200	35100	5900	20.2%
4	34051	Musicians, Instrumental	12800	15000	2200	17.2%
5	34056	Producers, Directors, Actors, Entertainers	31600	37000	5400	17.1%
6	93197	Precision Assemblers, n.e.c.	1200	1400	200	16.7%
7	89707	Electronic Pagination Systems Operators	2500	2900	400	16.0%
8	34053	Dancers & Choreographers	3200	3700	500	15.6%
9	22127	Computer Engineers	10300	11900	1600	15.5%
10	34047	Music Directors, Singers & Related	3600	4100	500	13.9%
11	25302	Operations-Research Analysts	2900	3300	400	13.8%
12	49017	Counter & Rental Clerks	21800	24700	2900	13.3%
13	68014	Amusement & Recreation Attendants	10900	12300	1400	12.8%
14	24199	Physical Scientists, n.e.c.	1600	1800	200	12.5%
15	85705	Data Processing Equipment Repairers	2500	2800	300	12.0%
16	66005	Medical Assistants	14700	16400	1700	11.6%
17	32917	Radiologic Technologists	1800	2000	200	11.1%
18	68035	Personal Home Care Aides	41500	46100	4600	11.1%
19	34058	Athletes, Coaches, Umpires & Related	6500	7200	700	10.8%
20	63035	Detectives & Investigators	5,600	6,200	600	10.7%

Source: New York State Department of Labor, Division of Research and Statistics

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SECTION 4

Occupational Profiles of Computer-Tech Jobs

Occupational Profiles of Computer-tech Jobs

What are computer-based tech jobs? Chances are that this will be one of the first questions that your participants will ask. Compiled in this section for you are ten of the faster growing computer-based tech occupations and their profiles. At your fingertips you will find information about these jobs like the: definition, salary range, educational requirements, certification and overall outlook.

➢ Goals for the facilitator

The facilitator will be able to:

- ✦ answer questions pertaining to employment and training of shown examples of computer-based technology jobs
- ✦ educate participants about job descriptions, education, and salary of listed computer-based tech jobs

➢ Goals for the participant

The participant will be able to:

- ✦ list five out of ten sample computer-based tech jobs
- ✦ from that list of five, describe what education or training is needed, salary range, occupational outlook, etc.

➢ Tasks for the facilitator

The facilitator will:

- ✦ show overheads of occupational profiles
- ✦ engage participant in each occupation
- ✦ ask questions of participants regarding overheads

COMPUTER SYSTEM/PROGRAMMER ANALYST

✦ Description:

Computer and office machine technicians install, test, calibrate, clean, adjust and repair office machines and computer terminals and other computer-related machines.

✦ Working Conditions:

Some computer and office machine repairers work shifts, including weekends and holidays, to service equipment in computer centers, manufacturing plants, and hospitals which operate round the clock. Repairers may also be on call at any time to handle equipment failure. They usually work in clean, well-lighted, air-conditioned surroundings, although some may have to work in cramped spaces. Repairers work throughout the country, even in relatively small communities.

✦ Salary range:

$ 18,000 to $28,800 to $46,000

✦ Educational requirements:

High school diploma; certificate or associate's degree preferred

✦ Certification or licensing:

Recommended

✦ Outlook:

Faster than average for computer repairers; about the same for office machine repairers.

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COMPUTER NETWORK SPECIALIST

✦ Description:

Computer network specialists administer computer networks so that they operate smoothly and consistently for high efficiency and productivity.

✦ Working Conditions:

Computer network specialists usually work in well lighted, air conditioned offices or laboratories in comfortable surroundings. They usually work about 40 hours a week, the same as many other professional or office workers. Some evening or weekend hours may be necessary to solve problems. Given the technology available today, more work including technical support, can be done from remote locations using modems, laptops, electronic mail, and through the Internet.

✦ Salary range:

$ 17,000 to $27,000 to $37,000

✦ Educational requirements:

High school diploma; bachelor's and/or master's degree for advanced programming and analyst positions.

✦ Certification or licensing:

Strongly recommended

✦ Outlook:

Faster than average

COMPUTER PROGRAMMER

✦ Description:

Computer programmers write the instructions (also called programs or software) that computers follow to perform specific tasks.

✦ Working Conditions:

Programmers generally work in offices in comfortable surroundings. Although they usually work about 40 hours a week, their hours are not always 9 to 5. Programmers may work longer hours or weekends in order to meet deadlines or fix critical problems that may occur during off hours. Because programmers spend long periods of time in front of a computer monitor typing at a keyboard, they are susceptible to eyestrain, back discomfort, and hand and wrist problems.

✦ Salary range:

$ 13,000 to $ 55,000+

✦ Educational requirements:

High school diploma; college degree preferred

✦ Certification or licensing:

Not mandatory; varies from company to company

✦ Outlook:

Strong overall

COMPUTER-AIDED DESIGN TECHNICIAN

✦ Description:

CAD technicians use computer-based systems to produce or revise technical illustrations needed in the design and development of machines, products, buildings, manufacturing process, and other work

✦ Working Conditions:

Most computer-aided design technicians work regular hours in laboratories, offices, electronics and industrial plants, or construction sites. Some may be exposed to hazards from equipment, chemicals, or toxic materials. Given the technology today, some work may be done from remote locations using modems, laptops, electronic mail, and through the Internet.

✦ Salary range:

$ 13,500 to $25,000 to $42,000+

✦ Educational requirements:

High school diploma; one-year certificate or two-year associate's degree

✦ Certification or licensing:

Certification is voluntary; licensing may be required for certain projects

✦ Outlook:

Good

COMPUTER-AIDED MANUFACTURING TECHNICIAN

✦ Description:

Computer-aided manufacturing technicians operate computer-controlled machines, equipment, and systems in the manufacture of products.

✦ Working Conditions:

Most computer-aided manufacturing technicians work shift hours in laboratories, electronics and industrial plants or construction sites. Some may be exposed to hazards from equipment, chemical, or toxic materials.

✦ Salary range:

$ 18,000 to $30,000 to $40,000

✦ Educational requirements:

High school diploma; two-year technical training program; apprenticeship

✦ Certification or licensing:

Recommended

✦ Outlook:

Excellent

DATABASE SPECIALIST

✦ Description:

Database specialist design, install, update, modify and otherwise maintain computer databases and provide both user and technical support and training.

✦ Working Conditions:

Database specialists normally work in offices with comfortable surroundings. They usually work a 40 hour week--the same as other professional or office workers. Evening or weekend hours may be necessary to meet deadlines. Because database specialist spend long periods of time in front of a computer terminal typing on a keyboard they are susceptible to eye strain, back discomfort, and hand and wrist problems.

✦ Salary range:

$ 17,000 to $27,000 to $37,000

✦ Educational requirements:

High school diploma; associate's degree in computer-related technology; bachelor's and/or master's degree for advanced positions.

✦ Certification or licensing:

None

✦ Outlook:

Faster than average

INDUSTRIAL ENGINEERING TECHNICIAN

✦ Description:

Industrial engineering technicians study the use of personnel, materials, and machines in factories, stores, and offices to determine efficiency.

✦ Working Conditions:

Most industrial engineering technicians work regular hours in laboratories, offices, electronics and industrial plants or construction sites. Some may be exposed to hazards from equipment, chemicals, or toxic materials.

✦ Salary range:

$20,400 to $28,300 to $38,000

✦ Educational requirements:

High school diploma; two-year college or technical school degree

✦ Certification or licensing:

Available

✦ Outlook:

Average to faster than average

MICROELECTRONICS TECHNICIAN

✦ Description:

Microelectronics technicians assist in the development, construction, and testing of microchips and electronic instruments using microchips

✦ Working Conditions:

Most microelectronic technicians work regular hours in laboratories, offices, electronics and industrial plants or construction sites. Some may be exposed to hazards from equipment, chemicals, or toxic materials.

✦ Salary range:

Average starting salary is $20,400

✦ Educational requirements:

High school diploma; two-year associate's degree

✦ Certification or licensing:

Voluntary

✦ Outlook:

Faster than average

ROBOTICS TECHNICIAN

✦ Description:

Robotics technicians install, program, and repair robots and related equipment by applying knowledge of electronics, electrical circuits, mechanics, pneumatics, hydraulics, and programming. Using power tools, hand tools, and testing instruments, robotics techs review, install, repair, and maintain robotics systems. Technicians may also train the client's staff in the operation of robots and related equipment.

✦ Working Conditions:

Most robotics technicians work regular hours in laboratories, offices, electronics and industrial plants or construction sites. Some may be exposed to hazards from equipment, chemical, or toxic materials.

✦ Salary range:

$ 20,000 to $35,000 to over $45,000 for those involved in design and training

✦ Educational requirements:

High school diploma; two-year associate's degree

✦ Certification or licensing:

Recommended

✦ Outlook:

Excellent

SOFTWARE ENGINEERING TECHNICIAN

✦ Description:

Software engineering technicians use computer languages to write programs that are capable of performing tasks specified by a software engineer.

✦ Working Conditions:

Software engineering technicians generally work in offices in comfortable surroundings. Although they usually work about 40 hours a week, their hours are not always 9 to 5. Software technicians may work longer hours or weekends in order to meet deadlines or fix critical problems that may occur during off hours. Because software technicians spend long periods of time in front of a computer monitor typing at a keyboard, they are susceptible to eyestrain, back discomfort, and hand and wrist problems.

✦ Salary range:

$ 20,000 to $25,000 to $30,000

✦ Educational requirements:

High school diploma; certification or associate's degree

✦ Certification or licensing:

Recommended

✦ Outlook:

Faster than average

COMPUTER SYSTEMS/PROGRAMMER ANALYST

✦ Description:

Systems analysts plan and develop new computer systems, or use existing systems to solve specific problems still being done manually or by a less efficient method.

✦ Working Conditions:

Computer systems/programmer analysts normally work in offices or labs in comfortable surroundings. They usually work about 40 hours a week. Evening or weekend work may be necessary to meet deadlines or solve problems. Given today's technology, more work can be done from remote locations using modems, laptops, electronic mail and through the Internet. Because analysts spend long periods of time in front of a computer terminal typing on a keyboard, they are susceptible to eye strain, back discomfort, and hand and wrist problems.

✦ Salary range:

$ 25,200 to $42,000 to $65,500

✦ Educational requirements:

High school diploma; bachelor's degree with a major or minor in computer science

✦ Certification or licensing:

Voluntary

✦ Outlook:

Faster than average

What are some high-tech careers?

This is a list of just *some* of the jobs in the high-tech world.

- **Computer Service Technician** repairs and maintains computers

- **Programmer** creates software that runs on the computer (like word processing programs, computer games, or spreadsheet programs)

- **Systems Analyst** helps offices set up a system that will be of the most use to them; adapts current equipment; recommends new equipment or new uses for equipment

- **Technical Writer** writes user manuals that explain how to use a software package or computer system

- **Salesperson** sells any or all of these products: the computers themselves (mainframes, mini- and microcomputers); software (business programs, video games, educational software;supplies (disks, paper, ribbons, form sheets); and lots more

- **Trainer** teaches people how to use the equipment and software

Plus many, many more!

SECTION 5

Women and Nontraditional Work

Women and Nontraditional Work

Often times when women are introduced to the idea of nontraditional employment, they come to the table with many different thoughts--some true and some false. It is the intent of this section to strictly educate the participant about nontraditional employment The basic advantages of nontraditional employment are outlined, fifteen popular myths and facts, the barriers that women may face entering a nontraditional occupation, and key points on how to be successful in overcoming those barriers. It is important to stress to women, entering a nontraditional field is not easy, but certainly achievable. One of the best ways to help your participants succeed, is to educate them.

➢ Goals for the facilitator

The facilitator will be able to:

- ✦ understand and discuss myths and facts about non-traditional work for women
- ✦ share with participants the advantages of women working in non-traditional employment
- ✦ discuss points that engage participants in regards to nontraditional employment

➢ Goals for the participant

The participant will be able to:

- ✦ recite five facts about women in nontraditional occupations
- ✦ list advantages of women working in nontraditional fields
- ✦ discuss four steps that they can follow in order to be successful in a nontraditional occupation

➢ **Tasks for the facilitator**

The facilitator will:

- show overheads **"Myths and Facts about Nontraditional Work"** and discuss with participants
- show overhead **"Advantages of Working in the Trades"** and discuss differences of traditional and nontraditional employment for women
- show overhead **"What Can You Do to Be Successful in a Nontraditional Job?"** to participants. After each point, discuss how they might achieve item listed

MYTHS AND FACTS ABOUT NONTRADITIONAL WORK

Myth 1. Women are in the labor force to earn some extra spending money.

F A C T The majority of women work because of economic need. In March 1998, women in the labor force were either single (25 percent), divorced (12 percent), widowed (4 percent), separated (4 percent), or had husbands whose annual 1987 earnings were less than $15,000 (13.5 percent).

Myth 2. Women and men are represented equally in most occupations.

F A C T Women workers are concentrated in traditionally female occupations. In 1989, women represented 80 percent of all administrative support (including clerical) workers, and 68 percent of all retail and personal services workers, but only 9 percent of all precision production, craft, and repair workers and 7.2 percent of all apprentices.

Myth 3. Jobs in which women are traditionally employed pay salaries comparable in which men are traditionally employed.

F A C T Jobs in which men are traditionally employed typically pay 30 percent more than traditionally female jobs.

Myth 4. Certain jobs are "men's work" and other jobs are "women's work."

F A C T Attitudes about which jobs are appropriate for men and which ones are appropriate for women are the result of tradition and socialization. The vast majority of job requirements are unrelated to sex.

Myth 5. Blue-collar work or heavy, physical labor is nontraditional for women.

F A C T Many jobs now thought to be nontraditional for women have been performed by women in the past. Throughout history, women have done heavy labor on the farm and in the fields alongside men, and during World War II, over 6 million women entered the labor force to build ships, airplanes and factory goods.

Myth 6. Women are not strong enough to do heavy labor.

F A C T The strength requirements for nontraditional jobs are often exaggerated. Many nontraditional jobs are less physically demanding than housework, and many traditional women's jobs, such as nursing and waitressing, are just as physically demanding as some nontraditional jobs. Moreover, the Occupational Safety and Health Administration (OSHA) requires that special equipment be provided for very heavy jobs regardless of whether the are being done by a man or a woman. In addition, mechanization continues to decrease the level of physical demand of many jobs. Finally, while the average man is stronger than the average woman, some women are stronger than some men. Women have excellent lower-body strength and with training can develop strong upper-body muscles as well.

Myth 7. Nontraditional jobs are too dirty, noisy, and dangerous for women.

F A C T Nontraditional jobs are often dirty and sometimes dangerous. However, both men and women must weigh the hazards with the benefits of taking certain jobs. In addition, many traditionally female jobs, like mothering and nursing, are dirty and messy, and some also have health hazards, such as computer terminal radiation and carpal tunnel syndrome.

Myth 8. A woman's place is in the home, not on a construction site.

F A C T In 1990, women accounted for 45 percent of the civilian workforce. Two out of every three workers entering the labor force between 1990 and 2005 will be women. The majority of women work because of economic necessity, and nontraditional jobs better enable women to support themselves and their families.

Myth 9. Women won't like trade work.

F A C T Many women enjoy working with their hands and outdoors. They take great pride in knowing they have helped to build or create something. As a result, researchers have found that most tradeswomen have a high degree of job satisfaction.

Myth 10. Women will leave a job to get married and have children; therefore, the job should go to a man who will stay.

F A C T On average, women will work 30 years over the course of their lifetimes, regardless of whether or not they are married. Of those women who do leave to have children, the majority return to work as soon as the children are old enough to be left in childcare.

Myth 11. Women workers are more expensive to employ because they miss too much work due to children's illness and pregnancy.

F A C T Studies have shown very little difference in the absentee rates of men and women workers. In fact, women over 45 are out sick substantially less often than men their age.

Myth 12. Married women who have husbands to support them should stay home and leave the good paying jobs for men.

F A C T Many American families are unable to support themselves on a single income. As a result, the proportion of married-couple families with the wife in the paid labor force rose from approximately 40 percent in 1972 to 56 percent in 1988. In that same year, the median income of married-couple families with

the wife working outside the home was $42,709 compared to $27,220 for those without the wife in the paid labor force. According to the U.S. Department of Labor, even if all the employed married women gave their jobs to unemployed men, there would still be 1.2 million unfilled jobs.

Myth 13. Women on a job site make it difficult for men to concentrate; they are too distracting.

F A C T While sexual harassment can be particularly harsh for women working in nontraditional occupations, it can happen in any work environment. The problem that must be stopped, however, is the harassing behavior, not women's entrance into the workplace.

Myth 14. Women will lose their femininity if they work in a trade.

F A C T Women can encounter offensive language anywhere, not just on the job site. While women need to be physically prepared for nontraditional jobs, there is nothing unfeminine about being physically fit.

Myth 15. Women do not have the mechanical or mathematical aptitude for skilled trade work.

F A C T There is no difference in women's and men's innate skills and potential to justify existing occupational segregation. A study conducted by the Johnson O'Connor Research Foundation Human Engineering Laboratory found no difference attributable to sex in 14 of 22 aptitude tests given to men and women. In the eight remaining tests, women excelled in six tests and men scored higher in two.

Adapted from the Orientation to Nontraditional Occupations for Women (ONOW) Curriculum of the Ohio Department of Education; the Women in Highway Construction manual of the U.S. Departments of Transportation and Labor; and *20 Facts on Women Workers* (1990), US DOL Women's Bureau.

ADVANTAGES OF WORKING IN NON-TRADITIONAL OCCUPATIONS

SALARY
Male intensive jobs pay more. Women on the average earn less than two thirds as much as men - in other words, a woman still only earns about 64 cents for every dollar a man earns. Skilled blue collar work can offer starting pay that is 200 percent more than entry level pay for clerical work or service jobs.

BENEFITS
Health Insurance, life insurance, and a pension are provided. Paid sick leave and vacation time are often provided.

HOURS
Many non-traditional jobs offer the opportunity to earn extra pay by working overtime. Also, these jobs often provide a greater variety of work schedules to choose from, and the pay for afternoon or evening shifts is often higher.

TRAINING
Most non-traditional jobs require specialized skills. In many jobs you can earn a salary while you are learning to do the work.

OPPORTUNITY
The work itself offers a wide range of opportunities for advancement and greater chances for self satisfaction. There are many opportunities to learn new skills on the job. And skilled tradesworkers can transfer to other industries or geographic locations in the United States.

SATISFACTION
Many women find great satisfaction in mastering the skills that are required to succeed in the trades. These jobs require physical strength and problem solving abilities. Often women find that success in this kind of work increases their self-esteem both on and off the job. And many women report that having a tangible, finished product is a source of pride and satisfaction.

Tully, Margaret (1990). Women in higher wage occupations: A Resource Manual, University of Wisconsin, Madison, WI

Barriers for Women Entering Nontraditional Work

Barriers inhibiting entry of women into nontraditional training and employment are complex and interrelated.

SOCIAL/CULTURAL

- Socialization to traditional female roles
- Unsupportive family and friends
- Negative attitudes of classmates and co-workers
- Lack of female role models
- Limited experience with tools/mechanical operations

EDUCATION AND TRAINING

- Limited information provided about nontraditional options
- Females directed toward traditional classes
- Lack of support for sex equity efforts by instructors and other personnel
- Lack of prerequisite classes such as math and science
- Limited access to on-the-job training and apprenticeships
- Lack of support services--child care, transportation, etc.
- Isolation and sexual harassment in the classrooms

ON-THE-JOB

- Discrimination in hiring, firing, promotion or lay-offs on basis of sex, race, age, physical build/ability
- Isolation and sexual harassment on the worksite
- Lack of support from some unions
- Lack of support services

SEXUAL HARASSMENT

- Unwelcomed behaviors can include teasing, jokes, remarks and questions; deliberate touching; letters, telephone calls or material of a sexual nature; pressure for sexual favors; sexual assault

Wider Opportunities for Women (1993). Women and Nontraditional Work Fact Sheet, Washington D.C.

What Can You Do To Be Successful In A Non-traditional Job?

1. Find out about the realities of the work you will pursue.

2. Learn more about the issues and problems that women face in these types of jobs.

3. Prepare for your role as a skilled or technical worker, overcome deficiencies such as math anxiety.

4. Become physically fit and prepared to endure the rigors of physical labor.

5. Identify support groups and develop a network of contacts to call upon when in need.

6. Learn the specifics of job seeking in a blue collar environment. Learn how to develop your own job leads.

7. Learn about ways to deal with discrimination. Give yourself time to make the transition. Personal and career changes are major life decisions and take time to evolve.

Tully, Margaret (1990). Women in Highest Wage Occupations: A Resource Manual, University of Wisconsin: Madison, WI

Personal Stories From Some Successful Women

A note for the facilitator: Please share the following stories with your participants. The experiences of these successful graduates of the new ventures program demonstrate that, with determination and hard work, goals can be reached. These women have succeeded in technical jobs, and so can your participants.

If possible, identify some female role models in your community, and invite them visit your program to share their stories in person. Making a connection with other women who share their goals is important for all your participants, especially the younger ones.

If you can find enough interested and available female role models in your community, you may want to set up a mentoring program. This added support could make all the difference to the success of your participants.

New Ventures is a comprehensive 21-24 week job skills training program designed to assist low income women prepare for economic self-sufficiency. By addressing barriers that specifically discourage women from the challenge of a higher paying, nontraditional career choice, the program enables participants to successfully pursue technical and trade careers.

The ***New Ventures*** model is similar to C.E.T. and some European apprenticeship models. It integrates academic and vocational skills, building in a sequential manner and developing relationships and connections with local business and industry. ***New Ventures*** consists of four separate components, each of which provides opportunities for gaining job skills and SCAN competencies needed in the workplace. The instruction utilizes a variety of styles, including experiential, lecture, discussion, and cooperative problem solving. The model has a cumulative curricula, with activities of each component building upon skills learned in previous components.

The four components consist of: Career Challenge, Pre-Employment Readiness, School-Based Instruction, and Work-Based Instruction.

➢ **Goals for the facilitator**

The facilitator will be able to:

- use New Venture personal stories to aid recruitment for training programs for women in nontraditional employment
- use these stories to encourage and support women currently enrolled in nontraditional training programs

➢ **Goals for the participant**

The participant will be able to:

- learn of other women's successes in nontraditional employment training programs
- make the connection between their training program and the successes of other women
- realize that women can succeed in nontraditional occupations and training programs

➢ **Tasks for the facilitator**

The facilitator will:

- use success stories to recruit women for nontraditional training programs
- discuss successes with participants, and show that their goals are attainable

➢ Amy was a participant in the Spring 1994 cycle. From the beginning, she knew she wanted to start her own business. Her skills were excellent, and she wanted a part-time job to give her the time to launch her own business.

New Ventures hired her in the Fall of 1994 as the part-time lab technician at $10/hour. Amy was an excellent Lab Technician, and was also hired by the Director of Professional Development Courses to be the evening Lab Technician for the fee-based Computer Repair classes. By the end of 1994, Amy formally registered her business, Information Specialist Plus, in New York State.

During the following cycle, Amy taught the DOS (Disk Operating System) class for New Ventures and renegotiated her fee to $25/hour. She taught a section of Computer Repair in the evening and formally presented course idea to the LaGuardia Adult and Continuing Education Curriculum Committee. In addition to teaching at LaGuardia, Amy taught Windows 3.1 at Pace University for four consecutive quarters.

Amy is now supported exclusively by her own business. Presently she has as many clients as she can handle. She lists among her clients: Chase Bank, Revlon, and Phillip Morris. She is now a Novell Certified Network Administrator (CNA), and plans to become certified soon in Microsoft NT. She commands between $40/hour and $45/hour on a regular basis and expects to get $85-100/hour once she becomes certified in Microsoft NT. Last year her business netted, after all expenses and taxes were paid, $24,000/year.

Amy managed to achieve all this success by overcoming a number of challenges, including a medical condition called "sarcoidosis" which produces lesions (sarcoids) throughout the body. She was having particular trouble with developing sarcoids in her eyes. After surgery, she was able to complete the training program with her vision severely impaired.

In an attempt to control her disease through meditation, diet, and exercise, Amy began to study Tai Chi Chuan. Amy offered Tai Chi Chuan instruction weekly to the other participants in the program as a part of their physical fitness component.

➢ **Cynthia** was a participant in the Fall 1995 cycle. She is a divorced mother of two children, one of whom is still in school and lives at home. When her unemployment insurance ran out during the middle of the training program, she was forced to go on welfare. But she successfully completed training in March 1996, and was accepted into the HRA Small Machine And Repair Training (SMART) Program.

In the summer of 1996, while still in the SMART program, Cynthia volunteered to design an after school computer program for the students at a local high school. Working with Cynthia, the school qualified to receive a gift from IBM of thirty-two computers (PC 300 Series Pentium Systems on "8224" Ethernet Stackable Hums, Novel Netware 4.X platform using VISTA 2 interconnection system). Cynthia received free instruction from IBM in the VISTA 2 system. She became the liaison between the high school and IBM ,and taught the instructors how to implement the VISTA 2 system in the classroom.

During her time in the SMART program, Cynthia also accepted occasional assignments from Aerotek, a technical temporary agency, at a beginning salary of $10/hour. She remained with Aerotek for three months after graduating, then signed up with Volt Services Group, another technical temp agency, at $17/hour. She left Volt Services Group and registered with the Rand Association, where she was assigned to the Manpower Demonstration Research Corporation (MDRC) as a full-time computer technician at $25/hour.

➢ **Kimberly** is a very successful graduate of a New Ventures Precision Manufacturing program. At the time Kimberly started the training program, she was busy caring for her children full-time and was receiving public assistance. A mother of four active children (ages thirteen, six, five and four), she has the extra challenge of having a son who has autism.

Kimberly met all the necessary requirements of the training program enthusiastically and professionally. Despite home demands, as well as several personal tragedies, she managed to have excellent attendance. She

was consistently one of the top students in the class. Because of her easy manner, sense of humor, and groundedness, the other participants made her the spokesperson of the group. Kimberly was really the glue that bound everyone together. After participating in her eight-week internship with Micro Instruments Corporation, Kimberly was offered a full-time position as an apprentice, starting at $6 an hour with benefits. Although this seems like a low starting salary, Kimberly will be receiving more training and will quickly increase her salary. She is extremely satisfied with her job and is thankful to have been given the opportunity to participate in this program.

Kimberly is now a proud homeowner who knows that she is in a field with great growth potential and in a company that respects her work. Micro Instruments, which specializes in machinery for automation, is a leader in training its apprentices. In fact, their Apprentice Program is the largest in New York State, and produces the most award-winning apprentices. With training, motivation, and the chance to prove herself, Kimberly has found her niche and has reached the self-sufficiency she always dreamed of.

➢ **Jill** was referred to New Ventures by Section 8 housing. As a single parent of three children (ages eight, ten, and fifteen), she had been a stay-at-home mom on Public Assistance for years. Although she had taken other educational programs, somehow she continued to be unemployed.

Jill was an inspiration to the other students in the program, and the group's closeness provided her the support that she needed to succeed. She excelled in her internship at the Observer Dispatch, a Utica based newspaper. By the end of the training program, four different departments had offered her employment.

Currently a full-time computer technician clerk for two departments, Jill currently makes $7.01/hour. Her internship experience counted toward the time of her probationary period, so health insurance was available to her sooner than she had expected. She is also eligible to have the newspaper pay tuition for work-related college courses.

➢ Thirty-three year-old **Gertrude** originally came from Germany. She came to the United States when she married a military man, approximately ten years ago. Recently separated and soon to be divorced, she was faced with the need to support herself and two children. She knew that she must become self-sufficient, and that a minimum wage job was not the answer.

Gertrude was an exceptional and extremely dedicated student who consistently went above and beyond the call of duty in everything she did. She carried that attitude over into work based learning. Much of her success stems from her belief that she cannot excel if she does not try. To that end, she has always been willing to tackle even the most distasteful of tasks without hesitation or complaining.

Gertrude is the type of person that, if you asked her to sweep a floor, you would probably find that she had gone ahead and mopped it, as well. During her work based learning component, she constantly asked questions, showing her eagerness to learn more about her chosen career.
She is currently employed at RONCO C&E as a cabler. Her hourly rate is $8 with full benefits.

➢ **Maria** is a 38-year-old divorced mother with a nine-year-old daughter. She has a high school diploma, but no college. After working as a sample cutter for a year, the business closed down and she got a job assisting the patternmaker in a bra and corset business. She worked there for four years, making $14.70 per hour until this business closed down. When she could not get another job, she enrolled in the New Ventures program. As a successful NV graduate, she was hired as a Technical Designer at a golfwear company for $41,000 per year.

➢ **Rita** is a 29-year-old Hispanic woman with two children (ages five and three). She is separated from her husband and receives $150 per week child support. She is a high school graduate with two years of college. When she started the training program, she had just gotten a job as a part -time cashier at Toys-R-Us at $5 per hour .

Although Rita was interested in fashion design and had taken some classes at F.I.T. back in 1985-87, she did not get very far in the fashion industry because of family responsibilities. She had a job history of several years as a clerical worker, and some babysitting, when she entered the New Ventures program. Rita moved around quite a bit during the program from one friend's house, to her sister's house, to another friend's house. But she managed to complete the program successfully, and got a job at a patternmaking service, making $350 per week. She really likes this work.

➢ **Fran** is a 29 year old Hispanic mother of two children (ages two and three). Separated from her husband, she lived with her mother and received Medicaid.

When she started the New Ventures program, she was working part-time as an aid in a physical therapy office for $7 per hour. Her job experience included work as a sales clerk in department stores and as an aide in various types of doctors offices. She held each job for just a year before she was "laid off".

Fran had been through numerous training programs, even earning an A.A.S. degree in Fashion Marketing, but she could never get a job in the industry. She was too shy to make it through a job interview. Her internship was the first time she had worked in the fashion industry.

After completing the internship, Fran started regularly answering ads in Women's Wear Daily. She found a part-time job as a Technical Assistant in a children's wear company at $10 per hour.

➢ **Hillary is** 36-year-old Hispanic mother of a three-year-old daughter. She is married and lives with husband, who is a truck driver. She has had a lot of family problems, and had always acted as the caretaker. Her husband was laid off during the time she was in the New Ventures program.

Hillary started the program with absolutely no job skills. Her last job was in 1986, as a drugstore cashier. The program helped Hillary get a job with a home fashion company, as a designer's assistant. She is making $20,000 per year, but has no health benefits. Her employer has promised to teach Hillary "everything" if she will stay in the job for a year.

Hillary did not even know how to answer the telephone appropriately when she started this job. She was unhappy for a time, because she felt uncomfortable with handling the paperwork and some of the other duties. She said that she "just wanted to cut." But the job has started going much better, and she is learning a lot.

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SECTION 6

Assessment

Assessment

Entering a nontraditional training program is a very big step, no matter the age or maturity level of your participants. One way to aide in the success of your potential participants, is to take some time and work with them. It is important for them to think about what skills they have, what interests them, and how much effort and motivation they are willing to put into a training program that could change their live forever. If you are strictly using the video for recruitment purposes, it would be beneficial to use this section as well. Before showing the video, take your participants on a guided fantasy, or look over the other handouts and discuss with your group. Either of these will get your participants thinking and excited about the video and a potential career.

➢ Goals for the facilitator

The facilitator will be able to:

- help participants ascertain if nontraditional employment (computer-based tech) is for them
- discuss with participants the skills attitudes and abilities that are welcomed in computer-based technology employment

➢ Goals for the participants

The participant will be able to:

- determine why they want to work
- express certain job considerations as important or not important
- list their skills, attitudes and abilities and match up with those of a computer-based technology occupation
- create their own image of a future career options

➢ **Tasks for the facilitator**

The facilitator will:

- distribute the **"Why Do You Want to Work?"** handout to participants and discuss
- hand out the **"Job Considerations"** worksheet to participants and let them find out what is important to them
- have participants think about their skills, attitudes and abilities
- show overhead **"Is a Computer-based Tech Job for You?"** and ask them to compare this list to their own list. Similarities and differences

Why Do You Want To Work?

Directions: Check the statements below that best describe the reasons you want to work.

Economic

1. Fulfill survival needs (food, clothing, and housing)
2. Save for long-term goals (home, car trips, and education)
3. Keep a family together during crisis (illness, divorce, and unemployment
4. Save money (investments, earnings, and retirement)
5. Obtain fringe benefits (health care and life insurance)
6. Get money and material things
7. Measure worth as an employee

Social

8. Meet new people and make friends
9. Be with people who share my interests
10. Prevent loneliness and isolation
11. Raise social status
12. Contribute to bettering society
13. Help others

Personal

14. Develop a sense of achievement
15. Raise self-esteem
16. Increase self-confidence
17. Feel secure
18. Belong to a purpose or a group of people
19. Use skills, knowledge, and education
20. Obtain independence
21. Direct and influence others
22. Meet new challenges
23. Provide for personal growth
24. Use creative talents and problem-solving abilities
25. Build character
26. Stimulate myself
27. Be recognized and valued by others

The National Institute for Work and Learning (1987). Career Passport. Center on Education and Training for Employment, Columbus, Ohio

Job Considerations

Directions: Number the following items according to what you would consider most important in seeking a job (1 being the most important and 21 being the least important)

____ a. Length of vacation

____ b. Amount of sick leave

____ c. Number of hours that you would work per day

____ d. Amount of money that you would earn

____ e. Amount of prestige that the job would hold

____ f. Amount of education that is required to obtain the job

____ g. Possibilities for advancement

____ h. How you would feel doing the job

____ i. Location of the job

____ j. People that you would be working with

____ k. Whether you would be working indoors or outdoors

____ l. Amount of hospitalization included

____ m. Whether you work days, nights, or swing shifts

____ n. Amount of responsibility

____ o. Amount of social obligations

____ p. Adequacy of facilities for working

____ q. Reasons why there is an opening

____ r. Whether the materials that you use are furnished by you or the company

____ s. Possible retirement age

____ t. Long-term security of the job

____ u. Amount of travel

The National Institute for Work and Learning (1987). Career Passport. Center on Education and Training for Employment Columbus, Ohio

Is A Computer-Based Tech Job For You?

(Examples of Skills, Attitudes and Abilities)

Do these words describe you?

___ accurate
___ bi-lingual
___ able to build things
___ careful
___ able to classify objects
___ communicates well
___ good decision making skills
___ dependable
___ pays attention to detail
___ can fix or repair objects
___ flexible
___ able to following directions
___ insightful
___ logical
___ proficient at mathematics
___ can operate tools/machines
___ organized
___ precise
___ able to plan accurately
___ has good problem solving skills
___ productive
___ responsible
___ self-confident
___ self-motivated
___ thorough will all tasks
___ can multi-task
___ able to work steadily on one task
___ works well with hand tools

The National Institute for Work and Learning (1987). Career Passport. Center on Education and Training for Employment, Columbus, Ohio

Transferable Skills

The chart of transferable skills below is a useful assessment tool for counselors working with women who have had experience working as a homemaker. It equates skills and experiences gained as a homemaker to skills utilized in paid employment. Experience has a homemaker involves many of the same skills as do those jobs which pay $10,$15, $25, and even $50-75 per hour. In the chart below, a description of the homemaker's work is at the left, the ability and/or skill is identified in the middle section, and the type of paid occupation closely related to it is at the right.

ACTIVITY	ABILITY/SKILL	EMPLOYMENT
Writing letters Reading to children Reading magazines Giving instructions Reading/Following recipes	*Verbal Aptitude*	Technical Writer Airline Dispatcher Heavy Equipment Sales Clergy Persons Public Relations Specialist
Using fractions in a recipe Budgeting money Counting change Measuring fabric for draperies	*Numerical Aptitude*	Accountant Auto Parts Counterperson Computer Programmer Surveyor Industrial Production Technician
Using a pattern to sew Applying makeup Arranging furniture Planning a garden	*Form Perception*	Machinist Tilesetter Auto Body Repair Painter
Assembling toys/household equipment from blueprint Visualizing the way furniture would look rearranged	*Spatial Aptitude*	Millwright Auto Mechanic Pattern Maker Electrician Design Engineer
Sewing Ironing Making beds Applying makeup Fixing hair Embroidering	*Finger/Manual Dexterity*	Telephone Serviceperson Typesetters Small Appliance Repair Person Assemblers Industrial Mechanic Industrial Repair Person
Sweeping/Mopping Turning pancakes, eggs, etc. Driving car Gardening	*Motor/Eye-Hand Coordination*	Truck Driver Machine Operator (all kinds) Fireman Power Truck Operator Drafting
Lifting child Lifting heavy groceries Rearranging furniture	*Strength*	Warehouse Worker/Dock Mover
Cooking Doing housework	*Ability/Interest in Working Alone*	Building Maintenance Security Guard Over-the-Road Truck Driver
Entertaining guests Planning activities for a party Keeping neighbor's children Coordinating children's activities	*Ability/Interest in Working with People*	Foreman Management Insurance Sales Chef Service Station Attendant

ACTIVITIES

(A) *Choosing Your Future**

Objective: To have participants begin thinking about their future; what interests them, what are their skills, how can they reach their projected future

Materials: tape player, soothing music, guided fantasy narrative

1. Ask students to get comfortable in chairs, explain that you will lead them through fantasy. Put music on and read narrative, pausing after each section.
2. Close your eyes. Relax.
3. Imagine that you are making a movie about your future. You are the writer, director, and star. You can be anything you want to be. There are no limits in your future. How much money you have now, where you live, your gender - none of these things matter.
4. Picture the most successful future you can imagine for yourself. What kind of job will you have? Enjoy the image.
5. What do you like best about your job? What special talents or skills do you bring to this job that make you successful?
6. Picture yourself working in your job. Enjoy the image.
7. When you are ready, come back to the classroom, feeling good about your future job.

Ask for volunteers to share their images about their future jobs.
Discuss the importance of keeping all options open in choosing a career in spite of the limits others set.

*For a facilitator who may be uncomfortable doing a guided fantasy, or for a younger, more immature group you may substitute a collage instead. You will need plenty of old magazines, markers, glue, scissors, and poster board. Read the narrative to the group or write the passages on newsprint for all to see. Allow the participants time to put their collages together based on their thoughts about their future. When they are finished ask for volunteers to share their collages about their future jobs. Discuss the importance of keeping all options open in choosing a career in spite on the limits others set.

SECTION 7

The City Search

City Search

The City Search is an activity that can be used with several different end results in mind. It is an experiential or project-based learning activity that leads your participants to self-discovery and comradery. You can set up a search in which your participants may discover more about the community that they live in, or you may want them to learn about the various employment opportunities which are within their reach. However you choice to implement this activity, it is most beneficial to be done in the beginning of your training program. This provides a unity between members of your program and establishes a certain level of self-esteem in each individual participant which can later be called back upon. If you find that a participant is exhibiting doubt in your program, bring up the success of the city search. In this section you have background information for planning and implementing a city search, suggested information for your participants to collect, and a sample of a city search with a career focus.

➢ Goals for the facilitator

The facilitator will be able to:
- ✦ design and implement an urban exploration for participants
- ✦ use as a career development tool

➢ Goals for the participants

The participants will be able to:
- ✦ collect information using a "scavenger hunt" format
- ✦ participate in a challenge--set in unfamiliar city, area of city, or mall
- ✦ take notes on search and relay back to group

➢ Tasks for the facilitator

The facilitator will:
- ✦ design itinerary including places and times for participants
- ✦ make all arrangements and implement urban exploration for participants
- ✦ lead successful debrief after city search with participants, learning feelings, thoughts, different experiences, etc.

CITY SEARCH: AN URBAN EXPLORATION

A City Search is a learning situation in which teams collect information related to a particular topic using a "scavenger hunt" format. The search is conducted in an unfamiliar city, section of a city, or may even be adapted to a mall. Teams are given specific tools and resources to plan, explore and find information in an unfamiliar territory. You may want to tailor this activity to a "Career Search".

Teams

The first step in planning the City Search is to create teams of 4-5 individuals who will work together in planning and problem solving, as well as forming a physical unit for exploring the city. Each team should be assisted by a group facilitator who has the overall knowledge of the Search. This person **does not** have to familiar with the city or section of the city to be explored. These teams will conduct the search and prepare a report for the whole group.

Tools and Resources

Each group is given a list of questions to be answered and materials to be collected. In addition, there are general evaluative questions about environments, service, efficiency and convenience. Each group must enter and leave the city center by public transportation. A set of appropriate tools might include: maps, city guides, telephone books, bus or subway schedules, $ for public transportation, pay phones, lunch, and incidentals (a budget is helpful), notepads, pens and pencils, camera, and backpacks.

Planning the field trip

Schedule some time the day before the City Search to divide the group into teams, distribute the assignments and the tools, and review the details of the planned field trip. Give each of the teams 2 hours to plan their particular exploration. Following the planning time, meet with the whole group and review the following:

- Meeting place

Everyone should meet at a place that allows parking and access to public transportation. Establish car pooling groups, a meeting time, and plan for handling missing persons. A "team buddy" system will make each team responsible for the individual members, and simplify the phone tree for emergency no-show or lateness. It is critical that the group not **be left waiting for a person who is late or not coming without prior knowledge that this will occur.**

- What to wear and bring

Agreement on appropriate, comfortable clothing is helpful. Teams should establish division of labor on carrying tools and resources and any other items.

- Lunch and finish times and places

Establish a meeting time and place for the teams to meet for lunch. Decide on the ending time, considering the various schedules and family responsibilities. Be sure to include the transit time back to the parking place.

- Report on the Search

Review the expectations for the report from the teams to give them an opportunity to do some planning while they are collecting information. Schedule at least 20 minutes per team for these reports on the day following the field trip.

Note: The City Search is most useful with groups who do not have experiences on a regular basis in cities. Suburban and rural dwellers, or groups who live exclusively in one urban neighborhood are most appropriate for this activity.

City Search Information to Collect

1. How and where to: Get bonded; apply for a driver's license; apply for food stamps; register to vote; obtain a copy of a birth certificate; request a copy of your social security card and statement of earnings.

2. Find job announcements and collect applications for city, county, state and federal jobs. Be able to describe the process of applying and testing for each.

3. Locate means of entering the city by airplane, train, and bus.

4. Interview a resident who has lived in the city for at least 10 years.

5. Identify educational programs available for: GED, postsecondary technical, and liberal arts study. Select one that you are interested in and prepare to sell it to the group.

6. Plan an evening of entertainment for yourself and a family member or close friend, with ticket prices, hotel, and meals outlined.

7. If you have an accident in this city, how do you get help.

8. What is the highest point in the city (building, natural structure).

9. Select a place in which you would like to work, and explain your reasons.

10. Where could you go to "work out" or engage in physical fitness activities.

11. Identify a structure that is a "symbol" for the city and learn the history of that symbol.

12. Compare the prices on all forms of transportation in the city (public transit, taxi, limo, etc.)

13. Locate the nearest public library; select a book you want to read, record the name, author and call number, and find out how to apply for a library card.

Note: These are suggest questions and activities. The list can be continued and be changed to apply to any specific group situation. Good luck.

PARTICIPANT HANDOUT

Sample of City Search with Career Focus: Manhattan

You will sign up in teams of three people with the City Search Conductors.

Your team will be given the following tools:

New York Subway Map (per person)
Two "Free" Newspapers - The Village Voice and New York Press
A Flyer on How to Apply for City, State and Federal Jobs
This City Search Directions Sheet (per person)
A $4.50 Metrocard or the equivalent in tokens (per person)

As a team, your objective is to accomplish as many of the assigned tasks as possible within the time limit. Then you are to meet the Conductors and the other teams at the debriefing destination, Dallas B.B.Q., 1265 Third Avenue between 72nd and 73rd Sts. at 1:00pm - TODAY! The telephone number to the restaurant is 212-772-9393. The Conductors will be there by 12:30pm.

TEAM TASKS FOR TODAY'S CITY SEARCH (TO BE COMPLETED IN ANY ORDER)

1. Visit SIBL at 34th and Madison. What kind of library is this? Go to one of the computer kiosk and explore their class offerings. Some of you may be fortunate enough to take or sit in on a free class today.

2. Visit the Mid-Manhattan Library on 41st and 5th Ave. They have the largest career resource centers in NYC.

3. Go to Jack's Store off of 32nd and 6th. What is the average price of goods on the ground floor of Jack's? If your team had $5.00 what would you purchase in the store and why?

4. Technology is present everywhere. Make a note of all of the usual and unusual places where you have seen the use of computers while on this city search.

5. Go to SonyWonder at 56th and Madison. Obtain a Swipe Card. Log in. Engage in one activity. Go to the end of the exhibit. Swipe out. Obtain a certificate of participation from SonyWonder.

6. Obtain information on City, State and/or Federal Jobs.

7. As a group, plan a day of activities with your family and/or friends. Go for the most fun with the least expense.

8. Sometimes you get so frustrated you feel like climbing the walls. Visit the Harmony Atrium near 68th and Broadway to see how some people handle this situation.

REMEMBER: STAY WITH YOUR TEAM MATES.
PLAY HARD! PLAY SAFE! PLAY FAIR! USE YOUR VOICE!
BECAUSE YOU WILL BE IN SOME PROFESSIONAL SETTINGS, DO NOT PROCEED AS A LARGE GROUP. THAT CAN BE OVERWHELMING SOMETIMES.

SECTION 8

Where to Go for More Information

For educational opportunities contact the admissions or guidance office of the local school district, vocational technical school, BOCES, community college or university.

For career and occupational information contact:

State Occupational Information Coordinating Committee
New York State Department of Labor
State Campus Building 12, Rm. 488
Albany, NY 12240
518-457-3800

For continuing education contact:

The Office of Continuing Education
Education Bldg., Room 307
Washington Avenue
Albany, NY 12234
518-474-5808

For employment training/retraining opportunities, contact the nearest Job Service office, or Community Service Center (see following pages), as well as local city and county government agencies offering employment and training programs. Consult your local phonebook.

LABOR MARKET INFORMATION (LMI) IS SYSTEMATIZED DATA, PRODUCED ON A REGULAR BASIS, WHICH INCLUDES A WIDE ARRAY OF EMPLOYMENT RELATED DATA ON ECONOMIC CONDITIONS AND LABOR FORCE CHARACTERISTICS, SUCH AS POPULATION, EDUCATION, INCOME, OCCUPATIONAL DESCRIPTIONS AND EMPLOYMENT CONDITIONS.

FOR LABOR MARKET INFORMATION AND STATISTICAL STUDIES CONTACT:

New York State Department of Labor
Division of Research and Statistics
Bureau of Labor Market Information
State Campus
Bldg. 12, Rm. 488
Albany, NY 12240
518-474-6950

FOR REGIONAL SPECIFIC LABOR MARKET INFORMATION CONTACT:

North Country - Alan Beideck
518-891-6680

Capital District - James Ross
518-587-8508

Hudson Valley - Frank Surdey
607-741-4485

Long Island - Gary Huth
516-934-8559

New York City - James Brown
212-352-6698

Southern Tier - Joseph Kozlowski
607-741-4485

Western NY - George Smyntek
716-851-2742

Finger Lakes - William Ramage
716-258-8870

Central NY - Roger Evans
315-479-3388

Mohawk Valley - Mark Barbano
315-793-2282

CONTACT YOUR STATE EMPLOYMENT SERVICE OFFICE TO PROVIDE HELP ON FINDING JOBS AND OTHER SERVICES SUCH AS CAREER COUNSELING.

Job Service Division
NY State Department of Labor
State Campus Building 12 G
Albany, NY 12240
518-457-2612

THE FOLLOWING IS A SHORT LIST OF WELL-KNOWN PERIODICALS WHERE COMPUTER-BASED TECHNICAL INFORMATION CAN BE OBTAINED:

Communications Technology
Phillips Business Information, Inc.
1201 Seven Locks Road
Potomac, MD 20854

Computerworld
Computerworld, Inc.
375 Cochituate Road
Framington, MA 01701-9171

EDN Product & Careers
Cahners Publishing Co.
275 Washington Street
Newton, MA 02158

Journal of Systems and Software
Elsevier Science Inc.
655 Avenue of the Americas
New York, NY 10010

INTERNET RESOURCES

Why use the Internet?

There are several reasons the Internet can be an asset to your job search

- Networking
- Current growth of on-line job listings
- Round-the-clock availability
- Free access to information and resources
- Broad geographic reach
- Opportunity to demonstrate skills
- The ease of key words
- Tips on companies that are increasing staffing
- Resume posting at no cost

Connecting to the Internet

Several places make it possible for you to access the Internet. Here is a list of places to check for Internet access, starting with some free sources:

- your public library
- community free-nets
- your place of training/work
- cyber café
- commercial providers
- Internet access providers

Goldsborough, Reid (1994). Straight Talk About the Information Superhighway. Alpha Books:

THE FOLLOWING IS A LIST OF JOB RELATED WEB SITES:

http://www.jobweb.com/ - Nat'l Asn of Colleges and Employers Jobweb

http://www.black-collegian.com/ - The Black Collegian Online

http://www.emory.edu/CAREER/ - Career Paradise of Emory University

http://www.careers.org/ - Career Resource Center

http://www.collegeedge.com/ - College Edge

http://www.careermosaic.com/ - Career Mosaic

http://www.careercity.com/ - Career City

http://www.occ.com/ - Online Career Center

http://www.espan.com/ - Espan

http://www.careerpath.com/ - Career Path

http://www.ajb.dni.us/ - America's Job Bank

http://www.stats.bls.gov/ocohome.htm/ - Occupational Outlook Handbook

http://www.jobtrak.com/ - JobTrak

http://www.monster.com/ - Monster Board

http://www.labor.state.ny.us/ - NYS Dept. of Labor

http://www.dol.gov/ - US Department of Labor

http://www.dbm.com/jobguide/ - The Riley Guide

http://americanet.com/classified.html - AmericaNet

http://www.careermag.com/ - Career Magazine

http://www.careers.org/ - Career Net

http://cweb.com/ - Career Web

http://www.studentcenter.com/ - Student Center

http://www.topjobsusa.com/ - Top Jobs

http://www.jobcenter.com/ - Job Center

http://asu.ugl.libumich.edu/chdoc/employment/job-guide.toc.hmtl - Job Search and Employment Opportunities

http://www/theworld.com/employme/subject.htm - The World Guide to Employment

http://www.fy.com/jobs.offered.html#browse - World Wide Web Classified's Jobs Offered

http://www.labor.state.ny.us/dolemp.htm - Helping NY Work Employment Opportunities

http://www.usnews.com/usnews/edu/ - US News Colleges and Careers Center

http://www.cs.purdue.edu/homes.swlodin/jobs.html - Employment Resources on the Internet

http://www.ieee.org/usab/documents/employment/employment.menu.html - IEEE-USA Employment Services

http://www.lattanze.loyola.edu/mongen.work.html - Find a Job

http://www.brandeis.edu/hiatt/web_data/job_listings.html - Job Listings

http://www.washingtonpost.com/parachute/ - What Color is Your Parachute: Job Hunting Online

TO RECEIVE MORE INFORMATION REGARDING NONTRADITIONAL EMPLOYMENT FOR WOMEN, TECHNICAL TRAINING FOR WOMEN, AND SOURCES OF ASSISTANCE CONSIDER CONTACTING:

Examples of computer-based technical training programs for low-income women in your area may include the following New Ventures programs:

New Ventures Program	Skill Training (1997-98)
Buffalo ACCESS Center 290 Main St., Room 425 Buffalo, NY 14202-4079 716-851-3763	Telephone Customer Service
Delaware-Chenango BOCES RR3, Box 307, East River Road Norwich, NY 13815 607-335-1200	Entrepreneurial Office Technology
EOC-Westchester 20 South Broadway 8th Floor Yonkers, NY 10701 914-966-6810	Cable Installation
Erie 2-CC BOCES Carrier Educational Center 8685 Erie Road Angola, NY 14006 716-549-4454	Computer Repair Technology
Family Institute at LaGuardia CC 31-10 Thomson Avenue C-314 Long Island City, NY 11101 718-482-5346	Computer Repair/Network LANS

Madison-Oneida BOCES BOCES ACCESS Center 508 Second Street Utica, NY 13501 315-738-7300	Computer Repair Technology
Monroe #1 BOCES 41 O'Connor Road Fairport, NY 14450 716-383-2256	Precision Manufacturing/CNC
Niagara County CC NCCC Trott ACCESS Center 1001 Eleventh Street Niagara Falls, NY 14301 716-278-8150	Computer Repair Technology
OCM BOCES Career Training Center 4500 Crown Road Liverpool, NY 13090 315-453-4422	Dental Assistance
St. Lawrence-Lewis BOCES 7227 U.S. Hwy 56 Norwood, NY 13668 315-353-6693	Intro-Computer-based Technology
Small Business Center at F.I.T. Seventh Ave at 27th Street Room C110 New York, NY 10001-5992 212-217-7250	Patternmaking
SUNY Canton Cornell Drive Faculty Office Building, Rm. 430 Canton, NY 13167 315-386-7011	Electrical Construction and Maintenance and Computer Maintenance Technology

Ulster County BOCES
PO Box 601
Port Ewen, NY 12466
914-331-0902

Machine Tool Technology/
CNC Operator

For more information regarding the New Ventures program, comprehensive evaluation report, or other, contact:

NYS Career Options Institute
6 British American Blvd.
Suite G
Latham, NY 12110
518-786-8524

SECTION 9

Resources Consulted

Resources Consulted

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MISSION POSSIBLE

WORKFORCE DEVELOPMENT RECRUITMENT VIDEO AND CAREER DEVELOPMENT CURRICULUM GUIDEBOOK

- Invites girls/females of all ages to consider training for higher wage nontraditional jobs
- Conveys both challenges and rewards of technical careers
- Emphasizes connections between a sense of adventure and a nontraditional job

Order your copy of the **MISSION POSSIBLE** package. Cost is $35 for the 15 minute video, career development curriculum guide book, and resources. The curriculum guide book includes: training tools, facilitator notes, transparencies and masters.

Return this form with a check made payable to Albany BOCES to:

Career Options Institute
6 British American Blvd., Suite G
Latham, New York 12110
ATTN: Connie Strassburg
PHONE: 518/786-8525 FAX: 518/786-3245

Please send ____ copy(ies) of the Mission Possible package (video and career development guide) to:

Name_____

Address_____

_____

_____

Enclosed is a check _____ Purchase Order_____ for $_____

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